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| 10/045,567 | 10/19/2001 | Michael J. Ryan | 35683.0new | 1827 |

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Kevin D. McCarthy
Hodgson Russ LLP
Suite 2000
One M&T Plaza
Buffalo, NY 14203-2391

| EXAMINER |
|-----------------|
| DAVIS, ROBERT B |

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 1722 | |

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,567

Applicant(s)

RYAN ET AL.

Examiner

Robert B. Davis

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 7-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3/2,5/03.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Noda (4,872,827: figures 1, 2 and 5; and column 2, line 43 to column 3, line 31).

Noda teaches a mold assembly (1) for use in a plastic blow molding process (figures and column 1, lines 6-8), the mold assembly comprising: a mold cavity shell (2) made by nickel deposition; the mold cavity shell having a cavity portion including a front face, a rear face and peripheral edge portions (4), the front face defining a cavity (6) in the shape of a portion of a product to be molded; the mold cavity shell also having coplanar, peripheral side portions (4) attached to said peripheral edge portions, the side portions defining front surfaces adapted to mate with corresponding surfaces of a mating mold cavity shell to define the product to be molded; a mold holder (3) located rearwardly of the mold; means for releasably connecting the mold holder (screws figure 5 and column 3, lines 4-9) to the peripheral side portions; and the mold holder defining all inner wall spaced from the mold cavity portion to define a heat transfer passage (17) between said inner wall and said cavity portion. The mold shell (2) is made of nickel by deposition; the claim language of "nickel vapour deposition" is a process limitation and

does not structurally define over nickel by deposition. The mold holder has heat transfer passages (19) therein.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda taken together with Inglesby (3,097,398: figures 1-4 and column 1, lines 35-47).

Noda discloses all claimed features except for the mold holder having a peripheral parting line portion located outwardly of the mold cavity shell peripheral side portions.

Inglesby discloses a mold shell (28) attached to a holder (16) by means of screws through openings (22-figure 1) wherein a heat transfer space (18) is located

between the shell and holder such that the holder has peripheral parting line portions as shown in figures 1, 3 and 4.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of Noda by having the holder having parting line portions exterior of the shell as disclosed by Inglesby for the purpose of allowing easy alignment of the shell with the holder during assembly.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda taken together with Briere et al (5,968,560: figure 2).

Noda discloses all claimed features except for the first and second molds only forming a portion of the blow molded article and the remainder formed by a third mold.

Briere et al disclose a blow mold having opposing shells and holder and a third molding member (25) to form a remainder of the molded article.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of Noda by using three molding members to form the molded article as disclosed by Briere et al for the formation of an article which would have an undercut portion if formed by two molds for the ease of removal of the article from the mold.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda taken together with Nakamura (4,962,555: figures 4(IV) and 4(V) and column 6, lines 31-53).

Noda discloses all claimed features except for the explicit use of an aluminum holder. For the record the examiner considers ZAS to satisfy the aluminum requirement, but the secondary reference is being used to solidify the rejection.

Nakamura discloses forming a mold of ZAS, which is identified as a zinc-aluminum-tin alloy.

It would have been obvious at the time of the invention to one of ordinary skill in the art for the ZAS of Noda to be considered as a zinc-aluminum-tin alloy as defined by Nakamura. Nakamura is clearly a plastic mold as shown in figure 4(V).

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda taken together with Japanese reference (5-112887: figures 7-12).

Noda discloses all claimed features except for the rear face of the shell having enhancement ribs being spaced apart. It appears that Noda has an internally threaded member to receive tension bolt (15), but this is not described in sufficient detail. It is noted that the bolts are disclosed as structural reinforcement for the shell.

The Japanese reference discloses a plurality of reinforcement ribs (11, 41, 44) on the back of an electroformed blow molding shell.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of Noda by using reinforcement ribs as disclosed by the Japanese reference for the purpose of instilling structural integrity to the mold as a whole as eluded to by Noda by using bolts (column 3, lines 4-9).

Allowable Subject Matter

9. Claims 2, 3 and 7-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art of record teaches or suggests an apparatus as claimed in claim 1 wherein the mold holder inner wall is formed with flow enhancement surface irregularities. In regards to claim 7, none of the prior art of record teaches or suggests an apparatus as claimed in claim 1 wherein the mold holder peripheral parting line having front faces extending slightly forward of the mold cavity shell side portion front surfaces to form a venting path. In regards to claim 9, none of the prior art of record teach or suggest a mold as claimed in claim 1 wherein the peripheral side portions having locating registering means and the mold holder has corresponding locating registering means adapted to receive the peripheral side portion locating registering means. The closest prior art (Noda) fails to teach or suggest any of these allowable features.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Davis whose telephone number is 703-308-2625. The examiner can normally be reached on Monday-Friday 9-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in black ink, appearing to read 'R. Davis', with a long, sweeping horizontal line extending to the right.

Robert B. Davis
Primary Examiner
Art Unit 1722

11/3/03